

ABSTRACT

An object identification system includes a monitor and a plurality of transceivers that communicate over a common medium. The monitor includes a first transmitter, a first receiver, and a processor. Each transceiver includes a resonant circuit, a transmitter, a receiver, and an antenna coupled to the resonant circuit. The processor performs a method for performing transceiver communication that includes the steps of: (a) transmitting from the first transmitter a first frequency for a first duration; (b) after lapse of the first duration, receiving via the first receiver a response signal from at least one of the resonant circuits; (c) determining a second frequency from the received response signal; and (d) performing transceiver communication using the second frequency. Transceivers of the type having a resonant circuit coupled to an antenna, when operating in close proximity to each other, may interfere with the response from a single transceiver by absorbing the energy intended to be received by the transceiver, absorbing the energy transmitted by the transceiver, or altering the resonant frequency of the resonant circuit. By determining the second frequency for transceiver communication, the monitor may establish communication with the single transceiver at a frequency better suited for transferring operative power to the transceiver, conducting an interrogation protocol for identifying the transceiver, or for data transfer.